AMAX EXPLORATION, INC.
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GEOTHERMAL BRANCH

August 20, 1981

Mr. Bernard Moroz
USGS/Reno District Geothermal Office
Kietzke Plaza, Bldg. D., Suite 137
4600 Kietzke Lane
Reno, Nevada 89502

Dear Mr. Moroz:

This letter is in response to your certified letter dated August 14, 1981, regarding operations on the McCoy Federal Leasing Unit in Churchill and Lander Counties, Nevada. As the district geologist for Nevada and Utah, I am responsible for exploration, and any problems associated with operations on the Mccoy Unit.

It is unfortunate that you and your staff choose to place so much emphasis on one trip to the field and that you have not kept current on the status of wells in the McCoy Unit. Your letter refers to requirements for completion, if you will check your files you will find that Notices of Completion have not been issed on wells 66-8 and 14-7. Your office was notified that these wells were being maintained in a suspension status for an unspecified period of time. The reason for this, as I have previously conveyed to you, is twofold:

1. To observe the temperature effects of zone to zone flow within the well and make it possible to cement the lower portion of the well at some future date.

2. Temporarily leave the well in a condition that would make re-entry possible if such action would be helpful to our evaluation of the well.

We have recently decided to abandon hole 14-7 and that work is tentatively scheduled to take place during September 1981. The plate that sealed the annulus and from which the tubing was hung was cut out at the completion of drilling operations on June 6, 1981 in anticipation of the September abandonment work. The required work on the site will be performed at that time and Notices of Completion and Abandonment will then be filed.

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Wells 25-9 and 38-9 were drilled this summer and we have not completed clean-up work on the sites. The annulus on these wells is not "shut in" as this would make it rather difficult to backfill and cement when we abandon the sites in September. If you will check your files you will find that the Geothermal Well Completion Report (not a Notice of Completion) filed June 12, 1981 for wells 25-9 and 38-9 define the status of these wells as "suspended".

In regards to other items in your letter:

A. Daily drill reports: the McCoy project area is roughly 60 miles and over an hour drive from the nearest phone. The project geologist often stayed at the site in a small self-contained trailer to conserve vehicle expenses and maximize his time in the field for exploration activities. I have conveyed to you many times over the phone, and to which you voiced no objection, that drill reports may cover periods of one to three days. If an emergency or a situation which the USGS should be notified about should occur, the field geologist would immediately drive to Austin and make the necessary calls.

B. The unfenced "pit": the original sump at site 38-9 was dug with great difficulty in solid rock, and ranged in depth from 2-4 feet. Drilling fluids in the sump consisted of a bentonite-water mix. When partially filled, the sump was about two feet deep with a small amount of fluid and a solid rock bottom. Fence posts could be driven only a few inches into the ground and in its present state the "pit" poses no danger to livestock. During the September clean-up operation, the sump will be completely covered.

C. Surface disturbance at well 25-9: the well site was occupied for 66 days, much of the time during wet, muddy conditions. Four large trucks and three trailers occupied the site at various times, and other trucks regularly drove to and from the site. Considering the time on location, surface conditions, the amount of traffic, and the fact that the site was not a drive-thru (trucks had to turn around on the site to exit), the surface disturbance is no larger than should be expected from such an operation.

D. Access route to site 25-9: the archeological inspection of site 25-9 and the access route was performed by Doug Koza from your staff and Dan Jacquet from the Carson City BLM office. No evidence that the area had any archeological significance was noted. The first three truck loads of equipment arrived on location before the field geologist arrived at the site. Despite prior instructions from myself, the drivers accessed over a more direct route approximately 300 feet long. Upon arriving at the site, I decided that since a road had now been established and the area did not appear to be archeologically sensitive, it seemed prudent not to attempt to abandon the new road and establish access over the flagged route.

E. Water flow at well 38-9: the field geologist notified your office of the discharge of water from 38-9 although he underestimated the volume and distance of flow from his vantage point. The water appeared to be very similar to potable water from the McCoy Mine Well (chemical analysis has since determined that it is nearly identical) and posed no threat to the environment. The hillside damaged is the site of numerous "cat cuts", prospect pits and other surface disturbances associated with several decades of mining activity. Obtaining clean downhole water samples is a very important aspect of our exploration program. To obtain such samples during drilling the options are to build large, million gallon plus sumps which would cause significant and permanent surface disturbance, or to allow the water to flow on the surface. In the past, this has resulted in little, if any, surface disturbance. On well 38-9 we underestimated the erosional capacity of the water on the rocky hill side. In the future we plan to limit these flows to areas less subject to erosion.

F. Fencing at sites 66-8 and 38-9: the fencing, though not esthetically pleasing to the eye, is temporary (to September) and has served its purpose (i.e. no dead cattle or horses were noted in the cellars). The temporary fencing was not attached securely to the posts to facilitate logging operations at the sites. If the fences were intended to be utilized for a longer period of time or livestock were in the area, a more formidable structure would have been erected.

In conclusion, I personally believe the problems outlined in your letter are grossly overstated and that your letter constitutes undeserved harassment of AMAX's exploration activities. During our operations, AMAX works within three basic parameters:

1. Diligent, thorough and cost effective exploration and evaluation of geothermal properties.

2. Performing exploration activities in a manner that will minimize effects on the local environment.

3. Minimize dangers to personnel working in the project area.

I believe AMAX works within these guidelines which are also the intent of the federal regulations you enforce.

If you have any questions please contact myself or Dean Pilkington at our Wheat Ridge, Colorado office at 303-420-8100.

Sincerely,

John E. Deymonaz

John E. Deymonaz
District Geologist

JED/c

cc: Ellis Hammett
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